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From: Taryn Scholz

Date: August 23, 2007

To: Eric Pastor – Pastor, Behling & Wheeler, LLC

Re: Gulfco Superfund Site
Hexavalent Chromium Analyses

Dear Eric,

It has recently been discovered that some of the samples from the Gulfco Superfund site were not analyzed for Chromium VI (Hexavalent Chromium) as intended per the Remedial Investigation/ Feasibility Study (RI/FS) Work Plan dated May 16, 2006. The affected samples include many of the sediment samples and all of the soil samples collected from June 2006 through August 2006 as part of the Phase 1 investigation. None of the aqueous samples (i.e., the groundwaters and surface waters) are affected.

It appears that this was due to a miscommunication on the Chain-of-Custody records (COCs) regarding how the Chromium VI test was requested. For the aqueous samples, a separate bottle was used for the Chromium VI test and thus the sampler included a separate indication (i.e., "Cr VI" or "Hex Cr") on the COC. The separate bottle was collected due to the short holding time of only 24-hours for Chromium VI in aqueous samples. In some cases, the Chromium VI bottles were shipped separately from the other aliquots with longer holding times.

For Chromium VI in solid samples, the holding time is 30-days and thus a separate bottle was not used. For the affected soil and sediment samples, the sampler indicated on the COC that 'Metals' were requested for each sample. It was the understanding of the sampler and the Field Supervisor that the term 'Metals' referred to all metals in the Work Plan including Chromium VI. However, the laboratory interpreted 'Metals' to mean the 25 target analyte Metals analyzed by EPA Method 6010B plus Mercury analyzed by EPA Method 7471A. Thus, Total Chromium by 6010B was reported, but Chromium VI by EPA Method 7196A was not reported. As required in the Quality Assurance Project Plan, the data validation includes a completeness check to verify laboratory results are reported for all samples listed on the COCs. Like the laboratory, the data validator interpreted 'Metals' to mean the 6010 Metals plus Mercury, and thus falsely concluded that all necessary results were reported.

Due to this miscommunication, the completeness values reported in the Data Validation Checklists, which have been submitted for each laboratory job number, are incorrect. The updated completeness percentages are as follows:

32%	Completeness-to-date on an analyte level (percentage of sediment samples, including all ICWW, pond, and wetlands sediments, with usable data for a specific analyte, project goal 80%) – Chromium VI
99.5%	Completeness-to-date on an analyte level (percentage of sediment samples, including all ICWW, pond, and wetlands sediments, with usable data for a specific analyte, project goal 80%) – all target analytes (i.e., all data points)

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0%	Completeness-to-date on an analyte level (percentage of soil samples, including all soil borings (SB) and Lot 21 surface soils (SS), with usable data for a specific analyte, project goal 80%) – Chromium VI
99.0%	Completeness-to-date on an analyte level (percentage of soil samples, including all soil borings (SB), Lot 21 surface soils (SS), and background soils (BSS), with usable data for a specific analyte, project goal 80%) – all target analytes (i.e., all data points)

(Note that Chromium VI is reported for all of the Phase 2 wetlands sediments and eight of the Phase 1 wetlands sediments from the North Area.)

Completeness-to-date on an analyte level for Chromium VI in the groundwater samples (including all Phase 1 and Phase 2 groundwaters) and surface water samples (including all ICWW, pond, and wetlands surface waters) remains at 100%.

CORRECTIVE ACTION

In order to prevent similar problems in the future, the following corrective actions have been implemented:

1. Future Chain-of-Custody records will include an attached list showing every target analyte for each sample.
2. The data validator shall verify that laboratory results are requested and reported for all samples as stipulated in the Work Plan and subsequent letters detailing sampling requirements rather than as listed on the Chain-of-Custody records. If there is any uncertainty, the QA Manager shall contact the Project Coordinator for clarification.
3. The Field Supervisor shall forward all Chain-of-Custody records to the QA Manager at the time of sample collection so the check can be completed in a timely manner, especially for tests with a short holding time.
4. Data Validation Checklists from this point forward will include updated completeness percentages.

DATA USABILITY

There is no effect on data usability. Note that Total Chromium, which is reported for all samples, includes any Chromium VI. In fact, the Level IV validation includes a check to verify that the total metal (i.e., Total Chromium by 6010B) is not less than the speciated metal (i.e., Chromium VI by 7196A). This check has been completed for the seventy-five samples with Chromium VI reported (i.e., all groundwaters, all surface waters, all Phase 2 wetlands sediments and eight of the Phase 1 wetlands sediments from the North Area) and passes in all but two cases (for aqueous samples FWPSW03-003 and SPSW02-002). Note that Total Chromium was detected in all of the groundwaters and sediments for which the check was made.

Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,

Taryn G. Scholz